

Applicants : Wei et al.
U.S. Serial No.: 10/650,365
Filed : August 28, 2003
Page : 3

Amendments To The Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-47. (Canceled)

48. (Currently amended) A recombinant interferon encoded by a polynucleotide having a sequence of SEQ ID NO.1 ~~or 3~~, wherein the recombinant interferon has an amino acid sequence of SEQ ID NO.2 ~~or 4~~, and the recombinant interferon can directly inhibit secretion of HBsAg and HBeAg of Hepatitis B Virus ~~has different spatial configuration and enhanced biological activity as compared to an interferon having an amino acid sequence of SEQ ID NO.2 or 4 but is not encoded by SEQ ID NO.1 or 3.~~

49. (Canceled)

50. (Previously presented) A composition comprising the recombinant interferon of claim 48.

51. (Previously presented) A pharmaceutical composition comprising the recombinant interferon of claim 48 and a pharmaceutically acceptable carrier.

52. (Currently amended) A recombinant interferon produced by a method comprising:

introducing into an ~~appropriate~~ isolated host cell a polynucleotide comprising SEQ ID NO.1 ~~or 3~~ that encodes a recombinant interferon;

culturing the host cell in an appropriate condition for the expression of the polynucleotide; and harvesting the recombinant interferon, wherein the recombinant interferon has an amino acid sequence of SEQ ID NO.2 ~~or 4~~, and the recombinant interferon can directly inhibit secretion of HBsAg and HBeAg of Hepatitis B Virus ~~has different spatial configuration and enhanced biological activity as compared to an interferon having an amino acid sequence of SEQ ID NO:2 or 4 but is not encoded by SEQ ID NO:1 or 3.~~

53. (Canceled)

54. (Currently amended) The recombinant interferon of claim 52 ~~53~~, wherein the polynucleotide comprising SEQ ID NO.1 is under the control of promoter P_{BAD} .

55. (Canceled)

56. (Currently amended) The recombinant interferon of claim 52, wherein the harvesting step comprises extraction of ~~super-compound~~ interferon from fermentation broth, collection of inclusion body, denaturation and renaturation of the harvested protein.

57. (Canceled)

58. (Currently amended) The recombinant interferon of claim 52, wherein, the harvesting step comprises separation and purification of the recombinant ~~super-compound~~ interferon.

Applicants : Wei et al.
U.S. Serial No.: 10/650,365
Filed : August 28, 2003
Page : 5

59. (Currently amended) The recombinant interferon of claim 52, wherein the harvesting step comprises lyophilization of the purified recombinant ~~super-compound~~ interferon.
60. (Canceled)
61. (Previously presented) A composition comprising the recombinant interferon of claim 52.
62. (Previously presented) A pharmaceutical composition comprising the recombinant interferon of claim 52 and a pharmaceutically acceptable carrier.